I. AMENDMENTS TO THE CLAIMS

Please find below a listing of claims that will replace all prior versions, and listings, of claims in the application:

Listing of claims

1. – 8. (Cancelled)

9. (Currently amended) A protection switching arrangement as claimed in claim 32 ~~claim 1~~, wherein the optical channel signals are lambdas.

10. (Currently amended) A protection switching arrangement as claimed in claim 38 ~~claim 1~~, wherein the optical protection switch is a first optical protection switch, said protection switching arrangement further comprising a plurality of second optical protection switches, each one of the second optical protection switches having a plurality of outputs each coupled to one of the inputs of a respective one of the optical switching matrices and a plurality of inputs coupled to the outputs of a respective one of the wavelength division demultiplexers.

11. –17. (Cancelled)

18. (Currently amended) A protection switching arrangement as claimed in claim 33 ~~claim 10~~, wherein the optical channel signals are lambdas.

19. –25. (Cancelled)

26. (Currently amended) A protection switching arrangement as claimed in claim 32 ~~claim 1~~, wherein the first optical protection switch is operative to couple one of its inputs associated with a faulty one of the wavelength division

demultiplexers to its protection output to enable the spare wavelength division demultiplexer to serve as a backup for the faulty one of the wavelength division demultiplexers.

27. –28. (Cancelled)

29. (Currently amended) A protection switching arrangement as claimed in claim 38 ~~claim 10~~, further comprising a spare optical switching matrix having a plurality of inputs and a plurality of outputs and being operative to switch optical channel signals from any one of its inputs to any one of its outputs, each one of the second optical protection switches having a spare output coupled to one of the inputs of the spare optical switching matrix.

30. –31. (Cancelled)

32. (Currently amended) A protection switching arrangement for optical switching systems, comprising:

- a plurality of optical switching matrices, each one the optical switching matrices having a plurality of inputs and a plurality of outputs and being operative to switch optical channel signals from any one of the inputs to any one of the outputs;
- a plurality of wavelength division demultiplexers, each one of the wavelength division demultiplexers having a plurality of outputs each coupled to one of the inputs of a respective one of the optical switching matrices, each one of the wavelength division demultiplexers having an input and being operative for dividing a composite optical signal at its input into optical channel signals and providing each optical channel signal to a respective one of the optical switching matrices;
- a spare wavelength division demultiplexer having a plurality of outputs each coupled to one of the inputs of a respective one of the optical switching matrices, the spare wavelength division demultiplexer having

an input and being operative for dividing a composite optical signal at its input into optical channel signals and providing each optical channel signal to a respective one of the optical switching matrices; and

- a first optical protection switch having a plurality of inputs, a plurality of straight-through outputs, and a protection output , the first optical protection switch being coupled at each of its straight-through outputs to the input of a respective one of the wavelength division demultiplexers and coupled at its protection output to the input of the spare wavelength division demultiplexer;
- a plurality of second optical protection switches, each one of the second optical protection switches having a plurality of outputs each coupled to one of the inputs of a respective one of the optical switching matrices and a plurality of inputs coupled to the outputs of a respective one of the wavelength division demultiplexers;
- a spare optical switching matrix having a plurality of inputs and a plurality of outputs and being operative to switch optical channel signals from any one of its inputs to any one of its outputs, each one of the second optical protection switches having a spare output coupled to one of the inputs of the spare optical switching matrix, ~~A protection switching arrangement as claimed in claim 29,~~ wherein each one of the second optical protection switches is operative to couple one of its inputs associated with a faulty one of the optical switching matrices to its spare output to enable the spare optical switching matrix to serve as a backup for the faulty one of the optical switching matrices.

33. (Currently amended) A protection switching arrangement for optical switching systems, comprising:

- a plurality of optical switching matrices, each one the optical switching matrices having a plurality of inputs and a plurality of outputs and being operative to switch optical channel signals from any one of the inputs to any one of the outputs;

- a plurality of wavelength division demultiplexers, each one of the wavelength division demultiplexers having a plurality of outputs each coupled to one of the inputs of a respective one of the optical switching matrices, each one of the wavelength division demultiplexers having an input and being operative for dividing a composite optical signal at its input into optical channel signals and providing each optical channel signal to a respective one of the optical switching matrices;
- a spare wavelength division demultiplexer having a plurality of outputs each coupled to one of the inputs of a respective one of the optical switching matrices, the spare wavelength division demultiplexer having an input and being operative for dividing a composite optical signal at its input into optical channel signals and providing each optical channel signal to a respective one of the optical switching matrices; and
- a first optical protection switch having a plurality of inputs, a plurality of straight-through outputs, and a protection output , the first optical protection switch being coupled at each of its straight-through outputs to the input of a respective one of the wavelength division demultiplexers and coupled at its protection output to the input of the spare wavelength division demultiplexer;
- a plurality of second optical protection switches, each one of the second optical protection switches having a plurality of outputs each coupled to one of the inputs of a respective one of the optical switching matrices and a plurality of inputs coupled to the outputs of a respective one of the wavelength division demultiplexers;
- ~~A protection switching arrangement as claimed in claim 29, further comprising~~ a plurality of third optical protection switches and a plurality of wavelength division multiplexers, each one of the wavelength division multiplexers having a plurality of inputs, each one of the third optical protection switches having a plurality of inputs each coupled to one of the outputs of a respective one of the optical switching matrices

and a plurality of outputs coupled to the inputs of a respective one of the wavelength division multiplexers.

34.- 37. (Cancelled)

38. (Currently amended) ~~A protection switching arrangement as claimed in claim 1,~~ A protection switching arrangement for optical switching systems, comprising:

- a plurality of optical switching matrices, each one the optical switching matrices having a plurality of inputs and a plurality of outputs and being operative to switch optical channel signals from any one of the inputs to any one of the outputs, wherein, for each one of the optical switching matrices, the plurality of inputs is a plurality of first inputs and the plurality of outputs is a plurality of first outputs, each one of the optical switching matrices having a second input and a second output;
- ~~said protection switching arrangement further comprising~~ a wavelength converting switch having:
  - a plurality of outputs each coupled to the second input of a respective one of the optical switching matrices; and
  - a plurality of inputs each coupled to the second output of a respective one of the optical switching matrices; ~~,~~
- a plurality of wavelength division demultiplexers, each one of the wavelength division demultiplexers having a plurality of outputs each coupled to one of the inputs of a respective one of the optical switching matrices, each one of the wavelength division demultiplexers having an input and being operative for dividing a composite optical signal at its input into optical channel signals and providing each optical channel signal to a respective one of the optical switching matrices;
- a spare wavelength division demultiplexer having a plurality of outputs each coupled to one of the inputs of a respective one of the optical switching matrices, the spare wavelength division demultiplexer having

an input and being operative for dividing a composite optical signal at its input into optical channel signals and providing each optical channel signal to a respective one of the optical switching matrices; and

- an optical protection switch having a plurality of inputs, a plurality of straight-through outputs, and a protection output , the optical protection switch being coupled at each of its straight-through outputs to the input of a respective one of the wavelength division demultiplexers and coupled at its protection output to the input of the spare wavelength division demultiplexer.

39. (Currently amended) ~~A protection switching arrangement as claimed in claim 10,~~ A protection switching arrangement for optical switching systems, comprising:

- a plurality of optical switching matrices, each one the optical switching matrices having a plurality of inputs and a plurality of outputs and being operative to switch optical channel signals from any one of the inputs to any one of the outputs, wherein for each one of the optical switching matrices, the plurality of inputs is a plurality of first inputs and the plurality of outputs is a plurality of first outputs, each one of the optical switching matrices having a second input and a second output;
- ~~said protection switching arrangement further comprising~~ a wavelength converting switch having:
  - a plurality of outputs each coupled to the second input of a respective one of the optical switching matrices; and
  - a plurality of inputs each coupled to the second output of a respective one of the optical switching matrices;~~.~~
- a plurality of wavelength division demultiplexers, each one of the wavelength division demultiplexers having a plurality of outputs each coupled to one of the inputs of a respective one of the optical switching matrices, each one of the wavelength division demultiplexers having an input and being operative for dividing a composite optical signal at its

input into optical channel signals and providing each optical channel signal to a respective one of the optical switching matrices;

- a spare wavelength division demultiplexer having a plurality of outputs each coupled to one of the inputs of a respective one of the optical switching matrices, the spare wavelength division demultiplexer having an input and being operative for dividing a composite optical signal at its input into optical channel signals and providing each optical channel signal to a respective one of the optical switching matrices; and
- a first optical protection switch having a plurality of inputs, a plurality of straight-through outputs, and a protection output , the first optical protection switch being coupled at each of its straight-through outputs to the input of a respective one of the wavelength division demultiplexers and coupled at its protection output to the input of the spare wavelength division demultiplexer;
- a plurality of second optical protection switches, each one of the second optical protection switches having a plurality of outputs each coupled to one of the inputs of a respective one of the optical switching matrices and a plurality of inputs coupled to the outputs of a respective one of the wavelength division demultiplexers.

40. (Currently amended) ~~A protection switching arrangement as claimed in claim 29, wherein~~ A protection switching arrangement for optical switching systems, comprising:

- a plurality of optical switching matrices, each one the optical switching matrices having a plurality of inputs and a plurality of outputs and being operative to switch optical channel signals from any one of the inputs to any one of the outputs, for each one of the optical switching matrices, the plurality of inputs is a plurality of first inputs and the plurality of outputs is a plurality of first outputs, each one of the optical switching matrices having a second input and a second output;

- ~~said protection switching arrangement further comprising~~ a wavelength converting switch having:
  - a plurality of outputs each coupled to the second input of a respective one of the optical switching matrices; and
  - a plurality of inputs each coupled to the second output of a respective one of the optical switching matrices;
- a plurality of wavelength division demultiplexers, each one of the wavelength division demultiplexers having a plurality of outputs each coupled to one of the inputs of a respective one of the optical switching matrices, each one of the wavelength division demultiplexers having an input and being operative for dividing a composite optical signal at its input into optical channel signals and providing each optical channel signal to a respective one of the optical switching matrices;
- a spare wavelength division demultiplexer having a plurality of outputs each coupled to one of the inputs of a respective one of the optical switching matrices, the spare wavelength division demultiplexer having an input and being operative for dividing a composite optical signal at its input into optical channel signals and providing each optical channel signal to a respective one of the optical switching matrices; and
- a first optical protection switch having a plurality of inputs, a plurality of straight-through outputs, and a protection output , the first optical protection switch being coupled at each of its straight-through outputs to the input of a respective one of the wavelength division demultiplexers and coupled at its protection output to the input of the spare wavelength division demultiplexer;
- a plurality of second optical protection switches, each one of the second optical protection switches having a plurality of outputs each coupled to one of the inputs of a respective one of the optical switching matrices and a plurality of inputs coupled to the outputs of a respective one of the wavelength division demultiplexers;

- a spare optical switching matrix having a plurality of inputs and a plurality of outputs and being operative to switch optical channel signals from any one of its inputs to any one of its outputs, each one of the second optical protection switches having a spare output coupled to one of the inputs of the spare optical switching matrix.

41. (New) A protection switching arrangement as claimed in claim 38, wherein the optical channel signals are lambdas.

42. (New) A protection switching arrangement as claimed in claim 39, wherein the optical channel signals are lambdas.

43. (New) A protection switching arrangement as claimed in claim 40, wherein the optical channel signals are lambdas.

44. (New) A protection switching arrangement as claimed in claim 33, wherein the first optical protection switch is operative to couple one of its inputs associated with a faulty one of the wavelength division demultiplexers to its protection output to enable the spare wavelength division demultiplexer to serve as a backup for the faulty one of the wavelength division demultiplexers.

45. (New) A protection switching arrangement as claimed in claim 38, wherein the optical protection switch is operative to couple one of its inputs associated with a faulty one of the wavelength division demultiplexers to its protection output to enable the spare wavelength division demultiplexer to serve as a backup for the faulty one of the wavelength division demultiplexers.

46. (New) A protection switching arrangement as claimed in claim 39, wherein the first optical protection switch is operative to couple one of its inputs associated with a faulty one of the wavelength division demultiplexers to its protection

output to enable the spare wavelength division demultiplexer to serve as a backup for the faulty one of the wavelength division demultiplexers.

47. (New) A protection switching arrangement as claimed in claim 40, wherein the first optical protection switch is operative to couple one of its inputs associated with a faulty one of the wavelength division demultiplexers to its protection output to enable the spare wavelength division demultiplexer to serve as a backup for the faulty one of the wavelength division demultiplexers.

48. (New) A protection switching arrangement as claimed in claim 39, further comprising a spare optical switching matrix having a plurality of inputs and a plurality of outputs and being operative to switch optical channel signals from any one of its inputs to any one of its outputs, each one of the second optical protection switches having a spare output coupled to one of the inputs of the spare optical switching matrix.